REMARKS

Claims 1, 2, 27-40, 71-73, and 76-81 are pending in the application. Claims 1, 2, 71-73 and 76-79 have been rejected pursuant to 35 U.S.C. § 112, first paragraph, with respect to definitions of A and B. Claims 1, 27, 28, 31, 34, 37, 40, 71-73, and 76-79 have been further rejected pursuant to 35 U.S.C. § 112, first paragraph, with respect to five definitions for R_1. Claim 71 has been rejected pursuant to 35 U.S.C. § 112, second paragraph. Applicants respectfully traverse the rejections.

Claims 76-79 have been cancelled.

Claim 1 has been amended to recite that A is CH_2 and B is CH_2. In addition, the thien-2-ylpyridyl, furan-2ylpyridyl, thien-3-ylpyridyl, and furan-3-ylpyridyl moieties in Claim 1 have been amended to correct any inadvertent introduction of new matter. The unsaturated phthalazine has been deleted. Claim 1, as amended, relates to compounds of Group III, as designated in the Restriction Requirement dated June 24, 2002, directed to compounds of formula IV.

Claim 71 has been amended to delete an "a".

The Amendments are submitted in accordance with the guidelines for the revised amendment practice according to 37 C.F.R. § 1.121. Applicants reserve the right to file divisional applications on any non-pending or non-elected subject matter.

The Examiner is cordially invited to contact the undersigned by telephone at the phone number provided below to further facilitate the prosecution of the application, if necessary.

Respectfully submitted,
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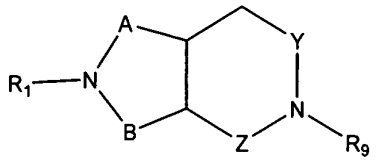
CLAIM AMENDMENTS

Claim 1. (Currently Amended) A compound of formula I



I,

or pharmaceutically acceptable salts thereof, wherein

A is ~~selected from the group consisting of a covalent bond,~~ CH_2~~, CH_2CH_2, and $CH_2CH_2CH_2$~~;

B is ~~selected from the group consisting of~~ CH_2 ~~and CH_2CH_2, provided that when A is $CH_2CH_2CH_2$, then B is CH_2~~;

Y is selected from the group consisting of a covalent bond, CH_2, and CH_2CH_2;

Z is selected from the group consisting of a covalent bond, CH_2, and CH_2CH_2, provided that when Y is CH_2CH_2, then Z is a covalent bond and further provided that when Z is CH_2CH_2, then Y is a covalent bond;

R_1 is selected from the group consisting of

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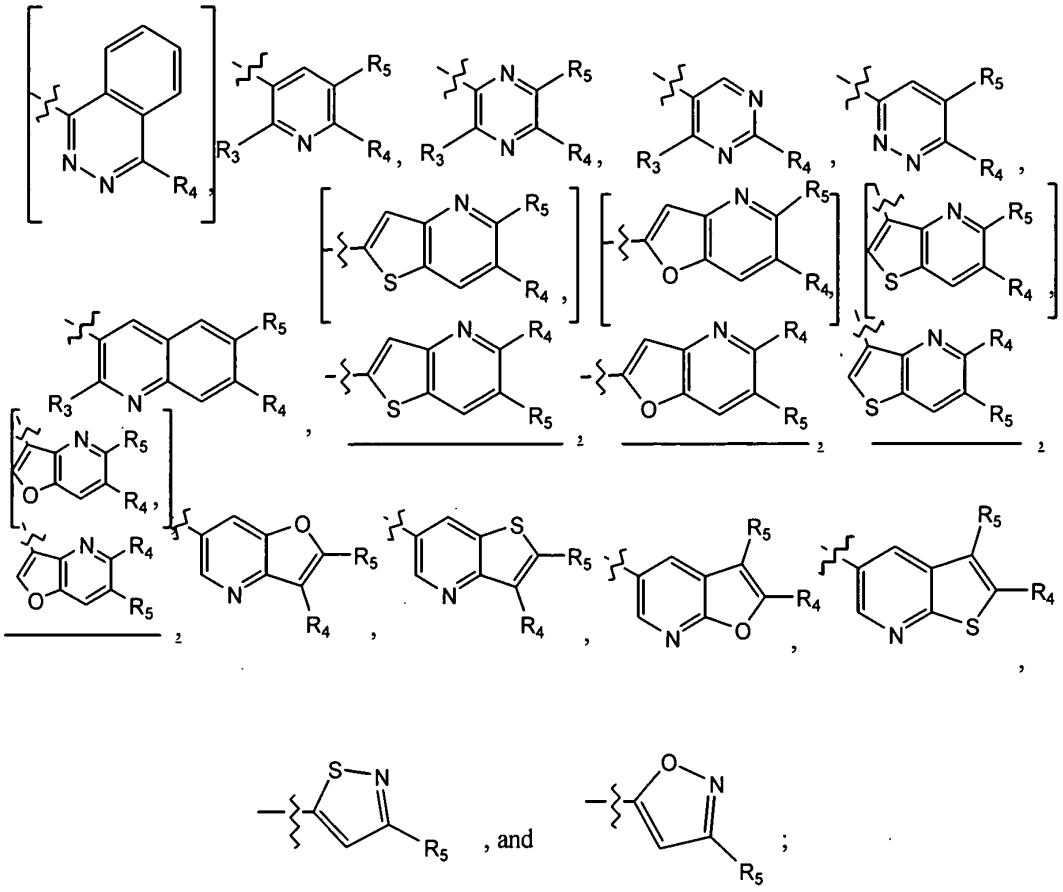

, and ;

R_3 is selected from the group consisting of hydrogen, alkyl, and halogen;

R_4 is selected from the group consisting of hydrogen, alkoxy, alkyl, amino, halogen, and nitro;

R_5 is selected from the group consisting of hydrogen, alkenyl, alkoxy, alkoxyalkoxy, alkoxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, alkyl, alkylcarbonyl, alkylcarbonyloxy, alkylthio, alkynyl, amino, aminoalkyl, aminocarbonyl, aminocarbonylalkyl, aminosulfonyl, carboxy, carboxyalkyl, cyano, cyanoalkyl, formyl, formylalkyl, haloalkoxy, haloalkyl, halogen, hydroxy, hydroxyalkyl, mercapto, mercaptoalkyl, nitro, 5-tetrazolyl, $-NR_6S(O)_2R_7$, $-C(NR_6)NR_7R_8$, $-CH_2C(NR_6)NR_7R_8$, $-C(NOR_6)R_7$, $-C(NCN)R_6$, $-C(NNR_6R_7)R_8$, $-S(O)_2OR_6$, and $-S(O)_2R_6$;

R_6, R_7, and R_8 are independently selected from the group consisting of hydrogen and alkyl; and

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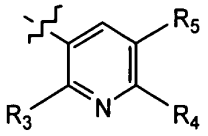
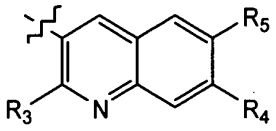
R_9 is selected from the group consisting of hydrogen, alkoxycarbonyl, alkyl, amino, aminoalkyl, aminocarbonylalkyl, benzyloxycarbonyl, cyanoalkyl, dihydro-3-pyridinylcarbonyl, hydroxy, hydroxyalkyl, and phenoxycarbonyl.

Claim 2. (Original) A compound according to claim 1 wherein

R_1 is selected from the group consisting of

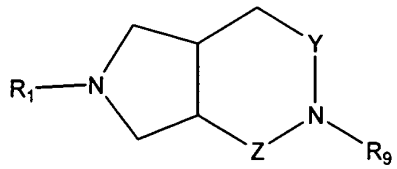


and



Claims 3-26 have been cancelled.

Claim 27. (Previously Presented) A compound according to claim 1 of formula IV



IV,

or pharmaceutically acceptable salts thereof.

Claim 28. (Original) A compound according to claim 27 wherein Y is a covalent bond and Z is a covalent bond.

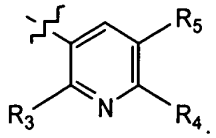
Claim 29. (Original) A compound according to claim 27 wherein

Y is a covalent bond;

Z is a covalent bond; and

R_1 is

R1



Claim 30. (Previously Presented) A compound according to claim 29 selected from the group consisting of

(cis)-3-(3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane;

(cis)-3-(6-chloro-3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane;

5-[(1R,5R)-3,6-diazabicyclo[3.2.0]hept-3-yl]nicotinonitrile;

(1R,5R)-3-(6-chloro-3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane; and

(cis)-3-(5,6-dichloro-3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane.

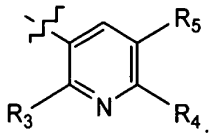
Claim 31. (Original) A compound according to claim 27 wherein Y is CH_2 and Z is a covalent bond.

Claim 32. (Original) A compound according to claim 27 wherein

Y is CH_2;

Z is a covalent bond; and

R_1 is



Claim 33. (Original) A compound according to claim 32 selected from the group consisting of

(cis)-5-(6-chloro-3-pyridinyl)octahydrpyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(6-chloro-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(6-chloro-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5,6-dichloro-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(5,6-dichloro-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(6-chloro-5-methyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(6-chloro-5-methyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5-methoxy-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(5-bromo-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aS,6aS)-5-(5-methoxy-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5-ethynyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5-bromo-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

5-((3aR,6aR)-hexahydropyrrolo[3,4-b]pyrrol-5(1H)-yl)nicotinonitrile;

(3aR,6aR)-5-(6-bromo-5-methoxy-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

5-((3aR,6aR)-hexahydropyrrolo[3,4-b]pyrrol-5(1H)-yl)-2-bromonicotinonitrile;

(3aR,6aR)-5-(5-vinyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5-methyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(6-bromo-5-chloro-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(6-bromo-5-methyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

(3aR,6aR)-5-(5-ethyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

[5-((3aR,6aR)-hexahydropyrrolo[3,4-b]pyrrol-5(1H)-yl)-2-bromo-3-pyridinyl]methanol;

(3aR,6aR)-5-(6-bromo-5-vinyl-3-pyridinyl)octahydropyrrolo[3,4-b]pyrrole;

[5-((3aR,6aR)-hexahydropyrrolo[3,4-b]pyrrol-5(1H)-yl)-2-bromo-3-pyridinyl]acetonitrile; and

(3aR,6aR)-5-[6-bromo-5-(methoxymethyl)-3-pyridinyl]octahydropyrrolo[3,4-b]pyrrole.

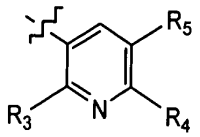
Claim 34. (Original) A compound according to claim 27 wherein Y is a covalent bond and Z is CH_2.

Claim 35. (Original) A compound according to claim 27 wherein

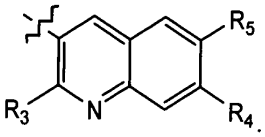
Y is a covalent bond;

Z is CH_2; and

R_1 is



and



Claim 36. (Original) A compound according to claim 35 selected from the group consisting of

(cis)-2-(3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-methyl-5-(3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(6-chloro-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(6-chloro-3-pyridinyl)-5-methyloctahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(3-quinolinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(5-hydroxy-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(5-methoxy-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(5-ethoxy-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(5-propoxy-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(6-chloro-5-methoxy-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole;

(cis)-2-(6-chloro-5-methyl-3-pyridinyl)octahydropyrrolo[3,4-c]pyrrole; and

(cis)-2-[5-(2,2,2-trifluoroethoxy)-3-pyridinyl]octahydropyrrolo[3,4-c]pyrrole.

Claim 37. (Original) A compound according to claim 27 wherein Y is CH_2CH_2 and Z is a covalent bond.

Claim 38. (Original) A compound according to claim 27 wherein

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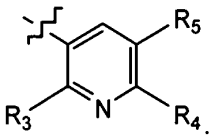
Y is CH_2CH_2;

Z is a covalent bond; and

R_1 is



Claim 39. (Original) A compound according to claim 38 selected from the group consisting of

(cis)-6-(6-chloro-3-pyridinyl)octahydro-1H-pyrrolo[3,4-b]pyridine and

(cis)-6-(3-pyridinyl)octahydro-1H-pyrrolo[3,4-b]pyridine.

Claim 40. (Original) A compound according to claim 27 wherein Y is CH_2 and Z is CH_2.

Claims 41-70 have been cancelled.

Claim 71. (Currently Amended) A composition comprising ~~a~~ a compound of Claim 1 in combination with a pharmaceutically acceptable carrier.

Claim 72. (Previously Presented) A method for selectively controlling neurotransmitter release in a mammal comprising administering a therapeutically effective amount of a compound of Claim 1 to a mammal in need of treatment for a condition selected from the group consisting of Alzheimer's disease, Parkinson's disease, attention deficit hyperactivity disorder, depression, pain, nicotinic withdrawal syndrome, Tourette's syndrome, and schizophrenia.

Claim 73. (Previously Presented) A method of treating a disorder comprising administering a therapeutically effective amount of a compound of Claim 1 to a host mammal in need of treatment for a condition selected from the group consisting of Alzheimer's disease, Parkinson's disease, attention deficit hyperactivity disorder, depression, pain, nicotinic withdrawal syndrome, Tourette's syndrome, and schizophrenia.

Claims 74-79 have been cancelled.

Claim 80. (Previously Presented) A composition comprising administering (cis)-3-(5,6-dichloro-3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane in combination with a pharmaceutically acceptable carrier.

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Claim 81. (Previously Presented) A method for treating a disorder comprising administering a therapeutically effective amount of (cis)-3-(5,6-dichloro-3-pyridinyl)-3,6-diazabicyclo[3.2.0]heptane to a mammal in need of treatment for a condition selected from the group consisting of Alzheimer's disease, Parkinson's disease, attention deficit hyperactivity disorder, depression, pain, nicotinic withdrawal syndrome, Tourette's syndrome, and schizophrenia.